

**Delta Operations for Salmon and Sturgeon (DOSS) Group**  
**Conference call: 02/08/11 at 9:00 a.m.**

**Objective:** Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmon and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://swr.nmfs.noaa.gov/ocap/htm>

**DWR:** Andy Chu, Angela Llaban, Mike Ford, Cynthia LeDoux-Bloom, Tracy Pettit

**FWS:** Nick Hindman, Roger Guinee

**NMFS:** Barbara Rocco, Bruce Oppenheim, Barb Byrne, Jeff Stuart, Garwin Yip

**DFG:** Dan Kratville

**Reclamation:** Thuy Washburn, Josh Israel

**SWRCB & EPA:** Not present

**Agenda**

- 1) Fish monitoring
- 2) Water project operations
- 3) Weather forecasts
- 4) Real-time data meeting

**Fish Monitoring:** The following table presents the fish monitoring data from 1/30/11 to 2/7/11.

Location	Chippis Is. Midwater Trawl	Sacramento Kodiak Trawl	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST	Moulton Weir RST	Deer/Mill Creeks RST
<b>Sample date</b>	2/2, 2/3, 2/4	1/31, 2/2, 2/4	1/31, 2/2, 2/4	2/1, 2/2	1/30–2/7	1/30–2/7	1/30–2/7	1/30–2/7
<b>Total catch</b>	10	3	2	428	34	53	45	216
<b>FR</b>	0	1	2	357	32	45	33	216
<b>LFR</b>	0	0	0	0	0	0	0	
<b>WR</b>	1	0	0	4	0	0	0	
<b>SR</b>	0	0	0	65	2	4	7	
<b>(Ad-clips)</b>	2	0	0	0	0	1	0	
<b>DS</b>	5	0	0	1	0	0	0	
<b>LFS</b>	0	0	0	0	0	0	0	
<b>SH (ad-clip)</b>	2	2	0	0	0	3	5	
<b>SH (natural)</b>	0	0	0	0	0	0	0	
<b>Avg. water temp (°F)</b>	49.6	48.4	49.3	48.9	51.5	49.6	50.8	44
<b>Avg. flows cfs</b>					9,157	8,774	7,621	216.1
<b>Turbidity (avg. NTU)</b>					N/A	7.85	5.33	2.7
<b>FR/SR avg. CPUE</b>					1.79	2.49	2.02	

<b>WR/LFR avg. CPUE</b>					0	0	0	
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(Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = steelhead; DS = Delta smelt; LFS = Longfin smelt)

Overall, approximately 90% of Chinook salmon caught were fall-run size; 10% were spring-run size; there were very few winter-run and no late-fall run size fish in the river or Delta.

Sacramento R flows are dropping from 200 to 300 cfs/day since the last storm event. Chinook caught in the beach seines were about 50–55 mm. This makes it difficult to tell whether they are spring- or fall-run fish.

In Deer and Mills Creeks, approximately 200 fall-run Chinook came down last week; the last spring-run yearling at Deer Creek was seen on January 18, 2011. At Mill Creek, the last spring-run yearling was seen on January 24, 2011.

Hatchery Releases (Joe Johnson DFG): Beginning February 7 and ending February 9, 2011, the Mokelumne River Hatchery will release 35,000 yearling steelhead into the Mokelumne River above the confluence of the Cosumnes River at Feist Ranch.

Nimbus Hatchery began releasing yearling steelhead February 2, 2011. The release site was in the American R at the Howe Ave. boat ramp and it should take about 3–4 weeks to get all 430,000 steelhead released.

The Feather River Hatchery also began releasing 47,000 steelhead in river on February 2 and will be done by February 15, 2011.

**Salvage data (1/30-2/6/11)** For additional info:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

CVP: There were 76 non-clipped fall-run Chinook salvaged for a loss of 45 fish, and 16 winter-run Chinook salvaged for a loss of 12 fish. There were no late-fall-run or spring-run Chinook.

SWP: There were 14 fall-run Chinook salvaged for a loss of 57 fish; there were no late-fall-run Chinook. Four spring-run Chinook were salvaged on January 31 for a loss of 17 fish. Nine winter-run Chinook were salvaged for loss of 39 fish. There were 33 ad-clipped and 4 natural steelhead salvaged.

Cumulative YTD totals: Since October 1, 2010, the combined loss for the season is 928 winter-run Chinook; 83 at CVP and 745 at SWP. Steelhead combined salvage is 144 ad-clipped fish and 30 natural fish. No green sturgeon, delta smelt, or longfin smelt were salvaged over the last week.

**Older juvenile Chinook loss and loss density:** The emigration peak into the Delta came early in mid-December, tapered off in January, and is tapering further in February (as seen at Knights Landing and the Sacramento trawl). Chipps Island had a few winter run moving out of the Delta in December and then nothing. Based on observations of older juvenile size Chinook between the Sacramento and Chipps Island trawls, many older juveniles appear to be rearing in the Delta. DOSS doesn't expect an increase in flows for at least a week; therefore, if fish are still "holding", they will most likely remain in the Delta. The older juveniles that came down in December are rearing somewhere in the Delta, possibly in the North Delta (Cache Slough) or down toward Decker Island and "hold" for up to 3 months.

The combined loss density was between 0 and 1.16 fish/TAF for the week of 1/31 through 2/6/11. Loss density peaked on February 3 at 1.16 fish/TAF and was less than 1.0 on the other days. The loss density is below the NMFS BiOp triggers.

**SWP & CVP OLDER JUVENILE\* CHINOOK LOSS & LOSS DENSITY**  
**01/31/2011 through 02/06/2011**

Date	OLDER JUVENILE LOSS** (# fish)			Combined Older Juvenile Loss Density (fish/TAF)
	SWP	CVP	Combined	
01/31/2011	17.44	0.00	17.44	0.99
02/01/2011	4.33	2.60	6.93	0.33
02/02/2011	0.00	0.00	0.00	0.00
02/03/2011	18.04	2.60	20.64	1.16
02/04/2011	0.00	2.60	2.60	0.15
02/05/2011	0.00	0.00	0.00	0.00
02/06/2011	0.00	2.60	2.60	0.14

DWR-DES 2/7/2011

Preliminary, subject to revision

\*Older juveniles defined as all Chinook > the min. winter-run length (Delta Model)

\*\*Loss data obtained from DFG, Stockton

**Spring-run surrogate loss:**

Update of coded wire tags (CWTs): The December 21, 2010, release had a confirmed loss of 95.61 fish to date representing 0.126% of the release; January 4, 2011, release had a loss of 58.34 fish to date representing 0.0375% of the release. No fish from winter-run hatchery releases on February 2 have been salvaged so far. Considering the unknown and unread (3 unread) tags, the projected loss for the December release is 98.79 fish (0.13%) and the loss for the January release is 60.28 fish (0.038%). All are under the 0.5% third OMR criterion in the NMFS BiOp. There was a question of how many clipped fish are showing up on average per week. DWR (Llaban) believes that the numbers are between 0 and 10 last week with a few in the winter-run category that were clipped at both facilities.

A question was raised about how often the CWTs were being picked up. According to DWR (Llaban) updates are provided once each week, but she did not know the details of how the tags are being transferred. It appears that it takes a week before tag data are available.

Summary: The spring-run surrogate loss rate, including the CWT projections, is below the NMFS BiOp's third trigger.

**Smelt working group (SWG) update:** Delta water temperature is increasing this week; the average temperature is about 50°F. Water temperature at Mossdale is higher than 51.8°F; turbidity is low (water is clear). At the 3-station checkpoints, turbidity is below 12.0 NTU (Holland), at 7.3 NTU (Victoria), and at 5.0 to 6.3 NTU (Prisoner Point). At other stations, turbidity is holding steady and is the lowest since earlier in the year. The fall midwater trawl indicates that some adult longfin smelt are from the Sacramento River; the smelt larva survey indicates that longfin smelt are at 10 of the stations; the numbers passed the threshold but the group is not requesting any action because of OMR flows. The San Joaquin flows were above the threshold level at 6,000 cfs on February 8, 2011. Most longfin are in the western Delta or the

Sacramento River side. Numbers in the central and southern Delta were low. Less than 10% came from central and south Delta larval samples. The next trigger in the FWS delta smelt BiOp is water temperature reaching 53.6°F at the three stations; net OMR flows can be changed at that point. The SWG made no recommendations for WOMT. Restrictions for Chinook are providing adequate protection for delta smelt.

### Operations as of 2/7/11

SWP		CVP	
Flows/Exports (cfs)			
Clifton Court intake	6,250	Jones Pumping Plant	2,700
Delta Outflow	16,700	American- Nimbus	2,500
Total Delta Inflow	26,711	Sacramento-Keswick	4,000
Oroville	1,750	Stanislaus - Goodwin	200
Sacramento R.(Freeport)	18,404		
San Joaquin R.(Vernalis)	6,858		
Merced R	3,500		
Mokelumne R	N/A		
Tuolumne R	1,500–2,000		
OMR (daily)	-4,500 to -4,900		
OMR 5 day	NA		
OMR 14 day	NA		
Reservoir Storage (TAF)			
San Luis	978	San Luis	973
Oroville	2,483	Shasta	3,512
		Folsom	485
Delta Operations			
DCC gates	Closed	X2 (Km)	NA
Outflow Index	17,100 cfs	E/I ratio (%)	30.3
Water Temperature (°F)	51.26		

San Joaquin R. at Vernalis: Most of the flows are coming from the Merced River, which is releasing at about 3,500 cfs. Tuolumne R is releasing between at 1,500–2,000 cfs for flood control space, which is much reduced from January releases.

San Luis Reservoir (SLR): DWR is 90 TAF away from filling on the state side. SLR is full on the federal side, the state side is filling slowly at 1–2 AF/day but projected to fill by the end of March. Since Reclamation is close to full on the federal side, they may be pulling out more water. The demands have increased on both projects south of the delta. DWR was hoping to fill this month, because the rate of filling is restricted may take longer. Municipal demands would not be affected by dry weather as much as agricultural. There is some irrigation going on now. Terminal reservoirs and groundwater banks are taking up to 4,000 cfs of SWP diversions. DWR is pumping for direct demands right now and for agriculture.

CVP (Washburn): Currently, pumping at three units and targeting 2,700 cfs, but reducing to two units on February 10, 2011, to 1,800 cfs. The question was raised as to whether it would be more advantage to fill SLR as soon as possible. Some federal water has already been surcharged into the state side. If Reclamation is okay with DWR taking over the water, it would be. There are some power issues, but it's not a problem so far because the projects are not up against any fish triggers.

**Weather forecast:** This week, somewhat dry initially. There is a potential for a fast-moving storm system by Monday or Tuesday (February 14–15). The 7-day forecast is not completely reliable at this time but DWR is watching it very closely.

**DOSS advice to WOMT and NMFS:** No advice, other than to continue meeting the OMR criterion of no more negative than -5,000 cfs.

**Real-time data reporting meeting:** DWR (Chu): Meeting with DWR Environmental Services internally this week. Once they meet, DWR will include the other agency fishery personnel and others after that. DWR needs to talk to Reclamation first before they talk to other fishery agencies. The goal is to ensure improvements are in place for next year.

**Next Meeting:** Conference call: 2/15/11, 9:00 a.m.